

May 23, 1948.

Dr. G. M. Savage,
Research Laboratories,
The Upjohn Company,
Kalamazoo 99, Mich.

Dear Dr. Savage,

I shall be glad to give you any information that you would like. Your letter, however, does not make it clear what kinds of mutants you are interested in. A reprint is enclosed describing a technique for the recovery of nutritionally exacting mutants. Reverse mutants, or mutants with a less exacting nutrition are obtained by selecting for them in a synthetic medium lacking the growth factors concerned. Fermentative mutants (enzymatically deficient) are obtained by examination of colonies on Trosin-Methylene Blue agar containing the sugar in question. Reverse mutants again are selected for by inoculating very heavily into synthetic medium with the sugar in question as the sole carbon source in a concentration of .05 -.10 %.

Virus resistant mutants are recovered as the survivors in a large population of lysis by the phage. I am now working on methods of detecting mutants affecting enzymes which result in an over all change of rH rather than pH (the latter being tested for with the RMB medium) but have had no pronounced success.

Sincerely yours,

Joshua Lederberg
Assistant Professor of Genetics.